

Agency:	Scottsdale		Title of Project:	Thomas Rd. and 86th St.	
Date:	10/1/2020				
Contact Name and Title:		Phone:	E-Mail:		
Sam Taylor, Traffic Engineering Analyst		480-312-2526	staylor@scottsdaleaz.gov		
Roadway Safety Program (RSP) Project Scope					
1.	Describe your safety improvement project in detail: (50 words or less)				
1a.	The purpose of this project is to provide a safe and controlled location for pedestrians to cross Thomas Road near 86th Street. There is a crash history along with existing and future development to warrant the improvement.				
2.	Describe the project location, include pertinent demographic and land development information:				
2a.	The location is on Thomas Road at 86th Street, approximately a quarter mile west of the signalized intersection at Pima Road and a quarter mile east of the signalized intersection at Granite Reef Road. There is existing park and a planned school on north side of the interseciton and existing residential units on the south side of intersection.				
3	For projects on State System (ADOT):	BMP: (Begin Milepost)		EMP: (End Milepost)	
4.	What network screening method was used to identify this project? <input type="checkbox"/> MAG <input type="checkbox"/> ADOT <input checked="" type="checkbox"/> Other (Below)				
4a	This location was identified as one of the top priorities by Scottsdale's pedestrian crossing prioritization scoresheet.				
5.	Was this project identified as a recommendation in a study? If so, what kind? (check all that apply)				
5a	<input type="checkbox"/> RSA <input type="checkbox"/> PA <input type="checkbox"/> SRTS Study <input checked="" type="checkbox"/> LASS Study <input type="checkbox"/> Other				
6.	Was the project identified using an agency adopted predictive safety analysis? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
7.	What is the safety justification for the proposed project?				
7a	There was a pedestrian collision at the intersection in 2014 resulting in an incapacitating injury. With a new pedestrian generator(school) and existing park across a major arterial, a safe pedestrian crossing is essential at this intersection. Additionally this intersection was studied as a part of MAG's Local Agency Safety Study and a Pedestrian Hybrid Beacon was the recommended safety countermeasure.				
8.	Is Public outreach required for your project? If "yes" Provide what was done, the date(s) and outcomes. (Attach documentation if applicable)				
8a	The city will provide educational resourses to instruct drivers how to respond to a pedestrian hybrid beacon.				
9.	What safety related public education will your agency be providing before placing the safety improvement in service, if applicable?				
9a	Educational tools are available online to citizens.				
10.	Equity: Input the largest percent for each element for the one-mile radius or offset (Click on the hyperlinks in the text to open maps. See directions on side on maps):				
	65 yrs and Older	Minority Groups	No Vehicle Households	Disabled	Living in Poverty
10a	22.00%	25%	8.00%	10.50%	5%
11.	Avg Daily Traffic (ADT) Volume:	30,000	Year Collected:	2018	
12.	Total Crash Frequency:	19	Crash Rate (MVM or MEV) (Insert from "Crash Rate" Work Sheet):	0.4	
13.	What is the posted speed limit?	40	Benefit/Cost:	2	

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

PROCUREMENT	REQUESTED PROGRAMMING	Location Description	Thomas Road and 86th Street			
		Work Description	Install Pedestrian Hybrid Beacon			
Funding Source		RSP				
Preferred Year to Program Work		2020				
COST ESTIMATE FOR PROCUREMENT		UNITS	QUANTITY	UNIT COST	TOTAL	
PROCUREMENT/INSTALL	Place for entering item #1	EA			\$ -	
	Place for entering item #2	EA			\$ -	
TOTAL – PROCUREMENT					\$ -	
DESIGN	REQUESTED PROGRAMMING <small>(Complete if Item will be programmed in the MAG TIP)</small>	Location Description	Thomas Road and 86th Street			
		Work Description	Install Pedestrian Hybrid Beacon			
		Funding Source	Local			
		Preferred Year to Program Work	2019			
	COST ESTIMATE FOR DESIGN		UNITS	QUANTITY	UNIT COST	TOTAL
	PRELIMINARY ENGINEERING <small>(15% plans) (Required for Budget)</small>	Topographic Survey	LS	1		\$ -
		Design Concept Report (DCR)	LS	1		\$ -
		Federal Project Environmental Determination	LS	1		\$ -
		HAZMAT Assessment	LS	1		\$ -
		SUBTOTAL – PRELIMINARY ENGINEERING COSTS				
	FINAL DESIGN <small>(30, 60, 95, 100% plans) (Required for Budget)</small>	Plans, Specifications, Cost Estimates, Bidding	LS	1	20,000.00	\$ 20,000.00
		Staff Time	LS	1	9,000.00	\$ 9,000.00
Drainage Report		LS	1		\$ -	
SWPPP		LS	1		\$ -	
SUBTOTAL – FINAL DESIGN COSTS					\$ 29,000.00	
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING					\$ 29,000.00	

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

CONSTRUCTION	REQUESTED PROGRAMMING (Complete only if Construction will be programmed in the MAG TIP)	Location Description	Thomas Road and 86th Street			
		Work Description	Install Pedestrian Hybrid Beacon			
		Funding Source	RSP			
		Preferred Year to Program Work	2020			
COST ESTIMATE FOR CONSTRUCTION		UNITS	QUANTITY	UNIT COST	TOTAL	
UTILITY RELOCATIONS (Required for Budget, May be 0 if no Utilities) The cost of minor utility relocation for the safety improvement project are eligible if the costs/activities involved are directly related to the safety project. Generally, burying overhead utilities is cost prohibitive		Relocate 69 kv (+) Poles	EA	1	\$ -	
		Relocate/Underground 12 kv lines	LF		\$ -	
		Relocate/Underground Irrigation Canal	LF		\$ -	
		SWG Relocations	LS	1	\$ -	
		Telephone/Cable TV Relocations	LS	1	\$ -	
		Upgrade Railroad Crossings	LS	1	\$ -	
		SUBTOTAL – UTILITY RELOCATION COSTS				\$ -
CONSTRUCTION (Required for Budget)		Construction Surveying	LS	1	2,500.00 \$	
		Relocate Sign W/ New Post & Post Base	EA	1	500.00 \$	
		Relocate Water Meter, Cos 2330 & 2345	EA	2	1,500.00 \$	
		Remove Ac Pavement	SY	89	25.00 \$	
		Remove Concrete ADA Ramp	EA	1	1,500.00 \$	
		Remove Concrete Sidewalk, Driveways & Slabs	SF	400	5.00 \$	
		Remove Curb & Gutter	LF	75	10.00 \$	
		Remove Dg	SF	180	1.25 \$	
		Remove Light Pole	EA	1	1,500.00 \$	
		Remove Pull Box	EA	1	523.35 \$	
		Remove Traffic Markings 4" Equiv, Cos Suppl, Spec 350	LF	59	4.25 \$	
		Sawcut & Match Existing	LF	250	2.00 \$	
		Dust Control	LS	1	2,500.00 \$	
		Haul Off	CY	10	50.00 \$	
		Subgrade Preparation	SY	133	7.50 \$	
		Swppp	LS	1	1,500.00 \$	
		Traffic Control	WK	4	1,500.00 \$	
		Pavement Replacement, Cos 2200	SY	89	75.00 \$	
		Concrete Sidewalk (Mag Det. 230)	SF	400	7.00 \$	
		Concrete Sidewalk Ramp, Cos 2232 (Modified-6' Wide)	EA	1	1,500.00 \$	
		Concrete Sidewalk Ramp, Cos 2233 Type "A"	EA	1	3,000.00 \$	
		Vertical Curb & Gutter, Cos 2220 Type "A"	LF	75	55.00 \$	
		White Stripe 90Mil Thermo Plastic 4" Equiv	LF	415	3.50 \$	
		Led Luminaire (1300K) (Horizontal Mount)	EA	2	1,000.00 \$	
		Mast Arm (20 Ft.) (Tapered)	EA	2	1,750.00 \$	
		Control Cabinet	EA	1	35,000.00 \$	
		Controller (Type 170)	EA	1	5,000.00 \$	
		Electrical Conduit (Its)	LF	10	50.00 \$	
		Electrical Conduits - 2-3" (Traffic Signal)	LF	275	55.00 \$	
		Foundation - (A - Pole)	EA	1	1,000.00 \$	
		Foundation - (R - Pole)	EA	2	2,500.00 \$	
		Hawk Signals	EA	6	2,500.00 \$	
		Mast Arm 40' For Signal Pole (Sr Pole)	EA	1	6,000.00 \$	
		Mast Arm 50' For Signal Pole (Sr Pole)	EA	1	7,000.00 \$	
		Meter Service Pedestal	EA	1	4,500.00 \$	
	No. 7 Pull Box - Traffic Signal	EA	6	960.00 \$		
	Ped Crossing Signals	EA	1	2,500.00 \$		
	Pedestrian Push Button	EA	2	750.00 \$		
	Pole (Type A)	EA	1	1,000.00 \$		
	Pole (Type Q)	EA	1	7,710.00 \$		

PROJECT COST ESTIMATE WORKSHEET
(Cost Estimates Are Required Regardless of Programming)

	Pole (Type R)	EA	1	8,000.00	\$ 8,000.00
	Traffic Signal Conductors Per The Approved Plans And Specifications	LF	285	40.00	\$ 11,400.00
	Traffic Signal Mounting Assembly (Type li)	EA	6	1,000.00	\$ 6,000.00
	Traffic Signal Mounting Assembly (Type V)	EA	2	1,200.00	\$ 2,400.00
	Utility Locate - Pothole	LS	1	5,000.00	\$ 5,000.00
	SUBTOTAL - CONSTRUCTION COST				\$ 197,408.36
MOBILIZATION AND ADMINISTRATION COSTS	CONTRACTOR MOBILIZATION (Typically 8% of construction cost)			8%	\$ 15,792.67
	TRAFFIC CONTROL (0-8% of construction cost)			5%	\$ 9,870.42
	CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)			5%	\$ 9,870.42
	CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)			15%	\$ 29,611.25
	SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS				\$ 65,144.76
	TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING				\$ 262,553.12
TOTAL COST ESTIMATE					\$ 291,553

Budget and Signature Page

Please describe the agency programming of this project in the agency's CIP To install a pedestrian hybrid beacon at Thomas Rd and 86th St

Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Amount
Design	Thomas Road and 86th Street	Install Pedestrian Hybrid Beacon	2020	Local	\$ 29,000
Construction	Thomas Road and 86th Street	Install Pedestrian Hybrid Beacon	2021	RSP	\$ 262,553
Total Cost					\$ 291,553

Signature: To be signed with printed hard copy that is sent to MAG

As the jurisdiction's manager/administrator or designated representative, I certify that the information contained in this application is accurate and complete and that the local funds for this project will be included in the Lead Agency's local current CIP/TIP or budget document if the project is selected for MAG Roadway Safety Program funding. I also certify the Lead Agency's commitment to maintain or operate the facility.

Signature: 

Name: *Mark Melnychenko*

Title: *Transportation and Streets Director*

Date: *9/29/2020*

RSP Application Benefit-Cost Tabulation Sheet

Agency:	Scottsdale	Title of Project:	Thomas Rd. and 86th St.
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Annual Benefit Tabulation

Severity	Annual Average	Estimated CRF* Reduction	Total Reduction	Unit Cost	Annual Benefit
Fatal	0.00	55%	0.00	\$9,515,371	\$0
Incapacitating Injury	0.20	55%	0.11	\$550,499	\$60,225
Non-Incapacitating	0.00	55%	0.00	\$149,132	\$0
Possible Injury	0.00	55%	0.00	\$103,145	\$0
Total Annual Benefits					\$60,225

Costs

Total Project Cost	\$291,553
Project Life (years)	20
Interest Rate (%)	8%
Capital Recovery Factor	0.1019
Annual Construction Cost	\$29,695
Annual Maintenance Cost	\$0.00
Total Annual Costs	
\$29,695	

Benefit / Cost

Annual Benefit	Annual cost	Benefit / Cost Ratio
\$60,225	\$29,695	2.0

List CMF(s) Used in the field below and its associated countermeasure(s)

CMF ID 9020: Install a pedestrian hybrid beacon



